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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,120	07/10/2001	Wei-Sing Chu	2313-118	8943
6449	7590	08/24/2005	EXAMINER	
ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005			YANG, NELSON C	
			ART UNIT	PAPER NUMBER
			1641	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/901,120	<b>Applicant(s)</b> CHU, WEI-SING	
	<b>Examiner</b> Nelson Yang	<b>Art Unit</b> 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 84-93 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 84-93 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment of claim 84 is acknowledged and has been entered.
2. Applicant's addition of claims 92, 93 is acknowledged and has been entered.
3. Claims 84-93 are currently pending.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 84-89, 92, and 93 are rejected under 35 U.S.C. 102(b) as being anticipated by Tavlarides et al [US 4,726,221].

With respect to claim 84, Tavlarides et al teach a continuous extraction reactor formed of a glass pipe column or vessel ten cm in diameter and fifty cm high with baffles along its axial dividing the vessel interior into fully baffled, agitated compartments (reaction chamber) (column 3, lines 29-35). Two piezoelectric ultrasonic transducers are located outside the vessel, each having an operative face against a respective flared flat ground-glass window (column 3, lines 42-40) and are connected to a pulse generator (central processing unit) (column 3, lines 54-56). As can be seen from fig. 1, the transducers are separate from the vessel, and therefore would be movable on said vessel.

The limitation “wherein said ultrasound is applied to a sample in said reaction chamber during a fixation process” is considered to be a method step, and therefore has not been given patentable weight in the product claim.

6. With respect to claim 85, two piezoelectric ultrasonic transducers are located outside the vessel, each having an operative face against a respective flared flat ground-glass window (column 3, lines 42-40).
7. With respect to claim 86, Tavalarides et al teach that the transducers can receive the echoes of the ultrasound pulses (column 5, lines 15-22), and therefore would constitute sensors.
8. With respect to claim 87, Tavlarides et al further teach measuring and storing values of travel time for ultrasonic energy over several temperatures of interest (column 6, lines 55-60), which would require the presence of heating or cooling means.
9. With respect to claim 88, Tavlarides et al teach the presence of peristaltic pumps (column 3, lines 65-67).
10. With respect to claim 89, Tavlarides et al teach the presence of a distributor plate (column 4, lines 1-10).
11. With respect to claims 92, 93, Talvarides et al teach that the piezoelectric ultrasonic transducers are located outside the vessel, each having an operative face against a respective flared flat ground-glass window (column 3, lines 42-40). Since the vessel is ten cm in diameter, the transducers would be within 1 inch of the sample in the vessel.

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12. Claims 84, 87, 90, 91 are rejected under 35 U.S.C. 102(e) as being anticipated by Unger et al [US 6,743,779].

With respect to claim 84, Unger et al teach a well plate, with individual wells (reaction chamber) and a therapeutic ultrasound transducer (column 3, lines 40-53). In accordance with the invention, cells, the compound to be delivered, an organic halide (if desired), and optionally a carrier are placed in the wells. The transducer is movable such that ultrasound is applied to cell culture plate such that the standoff platform is cut under each well for focusing ultrasound to the individual wells (column 3, lines 40-53). Unger et al further teach that power applied to the sonicator horn can be varied over power settings scaled from 1 to 10 by the manufacturer, as with Sonics & Materials Vibra-Cell Model VL1500 (central processing unit) (column 19, lines 43-50).

The limitation “wherein said ultrasound is applied to a sample in said reaction chamber during a fixation process” is considered to be a method step, and therefore has not been given patentable weight in the product claim.

13. With respect to claim 87, Unger et al teach a heat exchanger that maintains operating temperature for the sonication process (column 19, lines 33-36).

14. With respect to claim 90, the microtiter plate may include DNA, and would therefore constitute a microarray of nucleic acid (column 22, lines 25-50).

15. With respect to claim 91, Unger et al teach taking samples for measuring the temperatures in a solution of normal saline when exposed to ultrasound (column 34, lines 6-10).

***Response to Arguments***

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16. Applicant's arguments with respect to claims 84-91 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

17. No claims are allowed.

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

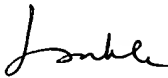
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571) 272-0826. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nelson Yang  
Patent Examiner  
Art Unit 1641

  
LONG V. LE  
SUPERVISORY PATENT EXAMINER  
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08/19/05